

**From:** Bhol, Saroj  
**Sent:** Thursday, December 16, 2004 8:59 AM  
**To:** 'jgross@nist.gov'  
**Cc:** 'sivaraj.shyam-sunder@nist.gov'; 'Terri@nist.gov'; Begley, James; Englot, Joseph; Fadavi, Ali; Lin, C. John; Lombardi, Frank; Reiss, Alan  
**Subject:** WTC- Information on Upgrade of Fireproofing



PRE-CONSTR  
3. - HARRIS, E

John,

The TAA design documents for Harris Beach renovation on the 85<sup>th</sup> floor of WTC 2(TAA # W00-2227)is on Disc 24-2of2 of the 36 CD's transmitted to NIST on 11/07 02. Please let me know if you need another copy. I am attaching a copy of the minutes of a pre-construction meeting from our Construction Standards file that documents the initial fire proofing installation and testing. Based on the recollections of the World Trade Department's TAA Project Manager and others, Harris Beach was directed by the World Trade Department subsequent to the pre-construction meeting to upgrade the fire proofing to 1 ½ inch. All records of this subsequent action, however, were kept by the World Trade Department in WTC 1 and are no longer available.

Regards

Saroj

Saroj Bhol, P.E.  
Manager, Design Standards Unit

THE PORT AUTHORITY OF NY & NJ  
Quality Assurance Division  
Engineering Department  
3 Gateway Center, 3<sup>rd</sup> Floor  
Newark, NJ 07102

-----Original Message-----

**From:** Englot, Joseph  
**Sent:** Tuesday, December 07, 2004 12:59 PM  
**To:** Bhol, Saroj  
**Cc:** [sivaraj.shyam-sunder@nist.gov](mailto:sivaraj.shyam-sunder@nist.gov); [Terri@nist.gov](mailto:Terri@nist.gov); Lombardi, Frank; Lin, C. John  
**Subject:** FW: Information on Upgrade of Fireproofing  
Importance: High

Saroj,

I have been handling requests from NIST for technical information on the existing WTC Fireproofing and its upgrade. Please investigate John Gross' timely request for information on tenant alteration work since it falls into your area.

Joe

Joseph M. Englot, P.E.  
Asst. Chief Engineer/Design  
Engineering/Architecture Design Division  
Engineering Department

973-792-4324

-----Original Message-----

**From:** John L. Gross [mailto:[jgross@nist.gov](mailto:jgross@nist.gov)]  
**Sent:** Tuesday, December 07, 2004 12:44 PM  
**To:** Englot, Joseph  
**Cc:** [sivaraj.shyam-sunder@nist.gov](mailto:sivaraj.shyam-sunder@nist.gov); [Terri@nist.gov](mailto:Terri@nist.gov)  
**Subject:** Information on Upgrade of Fireproofing

Dear Joe,

In the spring and summer of 2000, Harris Beach, which occupied the entire 85<sup>th</sup> floor of WTC 2, renovated their space and, as part of that renovation, upgraded the fireproofing on the floor trusses. Photographs show that the original fireproofing was indeed removed.

Records provided to NIST by the Port Authority DO NOT show this tenant alteration. Please provide NIST with all records pertaining to the renovation of the Harris Beach tenant space in the year 2000 including any construction audit reports and material testing reports.

I would appreciate a quick response as this information is important to our analysis.

Regards,  
John

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CONFIDENTIAL AND PRE-DECISIONAL COMMUNICATION

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John L. Gross, Ph.D., P.E.  
Research Structural Engineer  
National Institute of Standards and Technology  
100 Bureau Drive, Stop 8611  
Gaithersburg, MD 20899-8611  
Tel: 301-975-6068  
Fax 301-869-6275

# MINUTES OF MEETING

Date: APRIL 13, 2001 *Revised May 4, 2001*

RE: Pre-construction Meeting

PROJECT: HARRIS, BEACH, LLP. - TAA # 002227  
TWO WORLD TRADE CENTER 85<sup>TH</sup> FLOOR

## PRESENT:

David Crowe	Harris, Beach, LLP.(HB)
Bill Kealey	Harris, Beach, LLP.(HB)
Phil Fraschilla	N.Y.D.C.I.
Hector Tamayo	The Vanderbilt Group, LLC. (TVG)
Nick Tucci	MGJ
Alice Kent	Port Authority (WTC)
Tom Pulvirenti	Port Authority (WTC)
Mark Litwinko	Port Authority (WTC)
Gerald Drohan	Port Authority (WTC)
John Goon	Port Authority (WTC)
Mak Hanna	Port Authority (WTC)
Dennis Schiller	Port Authority (WTC)

On April 11, 2001 a Pre-construction meeting was held for the subject project. Since this project is conditionally approved, revised drawings addressing all outstanding comments are to be submitted by April 27, 2001.

The following inspectors are assigned to this project. All communications in the field concerning construction should be done through them.

Architectural/Lead Inspection —Mark Litwinko	(212) 435-8685
Mechanical Inspector —————Gerald Drohan	(212) 435-3201
Electrical Inspector —————John Goon	(212) 435-5394

If you cannot reach any of the above inspectors, contact me at (212) 435-2562.

The following documents were distributed and discussed.

- a) Guidelines for Construction
  - b) Responsibilities/Duties
  - c) WTC Construction Division resident engineer and inspector's telephone numbers
  - d) WTC Base Building Fire Alarm System
  - e) Contractor's Shutdown Request Form
  - f) Sample letter - "Request for Permit to Occupy"
  - g) Cutting and Welding Permit
  - h) Contractor I.D. Passes Form
- Scope of work NYDCI provided an overview of the project phasing and scope. Among various comments, NYDCI noted that a revised reflected ceiling plan is being prepared

and will be submitted to the WTC, which will show the demo and replacement of most 85th floor ceilings due to the change in spray-on fireproofing scope. Additionally, this pending submission will include required information detailing the allocation of 15 tons of supplemental cooling.

Conditional approval letter was given to NYDCI and copies were given to GC. Review comments were discussed.

Correspondence will be through Thomas Pulvirenti, Project Manager.

NYDCI to verify that all construction is code compliant. "Above the ceiling inspection" should not be scheduled until all associated construction in and around the ceiling is complete; inspection will be made 2-3 days after the WTC is contacted. NYDCI to coordinate with TVG regarding inspection dates.

Site Access: TVG stated that they would be responsible for setting up individuals for I.D. badge access. I.D. badges are available for pickup next to the visitor's desk at 2 WTC between the hours of 6:00 and 9:00 A.M. WTC stated that all badges must be return at the completion of the project.

Construction Schedule: TVG will submit a construction schedule to Thomas Pulvirenti no later than April 13, 2001. The tentative dates for the Above ceiling and The final inspection will part of the ID Task of the schedule.

Fire Alarm Testing: WTC suggested that a test should be performed prior to start construction.

Construction meetings: will be conducted every Wednesday at 11:00 am.

Rider "A" This new revised form was distributed to all concern parties and thoroughly clarified.

TVG Field Project director is Hector Tamayo tel # 212-775-9727

TVG must maintain a current complete set of construction documents bearing the appropriate stamp of WTC review and approval. Supplemental sketches and drawings must be submitted to the WTC for review. Once approved, stamped copies of these sketches must be included in this on-site set.

WTC will require that access be maintained to the 13 raceway access hatchways where HB intends to install stone flooring. WTC will consider maintaining access to every other hatch. This will require further investigation by the NYDCI in coordination with the WTC. details of the stone floor installation at these locations are at the discretion of HB, but must be approved by the WTC. Proposed installation detail to the WTC from NYDCI is pending.

WTC will not issue a certificate of occupancy to any tenant of the World Trade Center without (1.) first testing the fire alarm system and (2.) Tenant must have WTC 100% approval of leasehold design.

TVG coordinated a controlled pull test and certified inspection of the completed phase 3 fireproofing installation. The inspection was performed by Future Tech Services, a consultant to HB. The inspection did confirm the installation was in compliance with the testing criteria mandate by the NYC Building Code. The WTC directive as outlined in the memo of 3/24/99 requires that the fireproofing meets the greater of the original construction or  $\frac{3}{4}$ " thickness. HB project is considered a partial floor renovation. HB was directed by the WTC in a separate meeting held March 1, 2001 to provide  $\frac{3}{4}$ " thick fireproofing. WTC attended this inspection and has provided TVG and HB verbal confirmation of its approval of the inspection process and its affirmative results. A written report of the inspection is being prepared by Future Tech Services.

HB design team is currently preparing responses to the WTC comments related to TAA # 002227. Although a response is due within a week of this meeting, the WTC is willing to delay this response in support of the Design Team effort to respond with a cohesive package that will include all pending information related to the additional work to support the full removal and replacement of the existing spray on fireproofing. NYDCI must however provide an immediate email note to Tom Pulvirenti informing the WTC of the anticipated delay. The WTC stated that this delay would not hold up current construction activities.

WTC was informed that the folding partition shown in the west conference room has been eliminated from the scope of work. The resubmission of documents to the WTC will reflect this deletion.

WTC was informed that Siemens revisions to the fire detection's system would be included in the pending resubmission.

WTC requested that TVG remove the soap lines in the toilet rooms, including removal of the risers above and below the floor decks (top and bottom).

WTC stated that it is very important that TVG know and follow all rules related to fire alarm and fire protection shut downs, connections and modification work.

WTC will not permit "flexible" sprinkler drops. It was noted that MGJ did not specify or request the use of these devices.

WTC has requested that TVG remove existing plumbing waste lines from the northwest corner of the site (former tenant toilet rooms). Portions of this plumbing identified to be reused may remain intact. WTC will inspect this condition and provide guidance to TVG. TVG to attend this inspection scheduled for Thursday 4/12.

TAA # 002219 will remain open until fire detection's systems contained within are complete tested and inspected.

All questions regarding construction details by the contractor or other must be directed to the Architect/Engineer of Record.

If the Architect Engineer requires clarification, please call me at (212) 435-2562.

All code related items requiring clarification must be cleared by WTC Project Management through the Port Authority's Quality Assurance Division, Tenant Construction Review Unit.

The Project Report, copies of which has been furnished to all interested parties, as The WTC will proceed in reliance upon the decisions and statements above. If there are any discrepancies or misunderstandings, the parties are directed to bring them to our attention in writing (with copies to all parties who received this Project Report) within three (3) days.

Please review the above and advise the undersigned of any errors, omissions or deletions.

---

Thomas Pulvirenti  
Project Manager

Request for Clarifications on Fireproofing of the 85th Floor of WTC 2 - Messag...

File Edit View Insert Format Tools Actions Help

Reply Reply to All Forward

Extra line breaks in this message were removed.

From: John L. Gross [jgross@nist.gov]  
To: jengl@panynj.gov  
Cc: sivara.j.shyam.sunder@nist.gov; Terri@nist.gov; ncarino@email.nist.gov; Cheri.Sawyer@nist.gov  
Subject: Request for Clarifications on Fireproofing of the 85th Floor of WTC 2

Sent: Mon 4/18/2005 2:36 PM

Attachments: Letter to PA regarding fireproofing 18 Apr 05 - B.doc (52 KB)

Joe,

Attached is a request for clarifications regarding information on the upgraded fireproofing of the WTC towers and the Port Authority's response of December 16, 2004.. Please let me know if you have any questions about my request.

Regards,  
John

CONFIDENTIAL AND PRE-DECISIONAL COMMUNICATION

John L. Gross, Ph.D., P.E.  
Leader, Structures Group  
National Institute of Standards and Technology 100 Bureau Drive, Stop 8611 Gaithersburg, MD  
20899-8611  
Tel: 301-975-6068  
Fax 301-869-6275

Follow up request  
to 665-P

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Request f...

Tracking...

4:37 PM



**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Institute of Standards and Technology**  
Gaithersburg, Maryland 20899-0001

April 18, 2005

Joe Englot  
Port Authority of New York and New Jersey

Dear Joe:

This is a follow-up to my questions to the Port Authority regarding renovations on the 85<sup>th</sup> floor of WTC 2 and the Port Authority's reply from Saroj Bhol dated December 16, 2004.

First, the original list of floors that had been upgraded was compiled from Construction Audit Reports and did not include the renovation undertaken in 2001 by Harris and Beach, LLP. The information the Port Authority provided regarding this tenant renovation is quite complete including meeting minutes and a set of 78 drawings. Since this work was not included originally, how are we to be certain that the Port Authority has reported all work related to upgrade of fireproofing on the floors of interest?

Second, the minutes from the pre-construction meeting dated May 4, 2001, indicate that the work is considered a "partial floor renovation." However, Dwg. A-4 - Construction Phasing Plan, seems to indicate that the entire floor was renovated. Indeed, Harris and Beach did occupy the entire 85<sup>th</sup> floor of WTC 2. Since the fireproofing thickness for a partial floor renovation needed to be only 3/4 inch rather than 1-1/2 inches (per the Port Authority guidelines), this distinction is important to the understanding of what was in place on September 11, 2001.

The information we have from Beach and Harris indicates that renovations were in progress as late as July of 2001. Is there any information regarding whether the work had been completed by September 11<sup>th</sup> or, how much had been completed?

Thank you in advance for your prompt attention to this matter.

With regards,

John L. Gross, Ph.D., P.E.



Cheri Sawyer

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**From:** Bhol, Saroj [sbhol@panynj.gov]  
**Sent:** Tuesday, April 26, 2005 8:57 AM  
**To:** jgross@nist.gov  
**Cc:** sivaraj.shyam-sunder@nist.gov; Terri@nist.gov; ncarino@email.nist.gov; Cheri.Sawyer@nist.gov; Begley, James; Fadavi, Ali; Lin, C. John; Lombardi, Frank; Reiss, Alan  
**Subject:** FW: Request for Clarifications on Fireproofing of the 85th Floor of WTC 2



Letter to  
 regarding fire

John,

I am responding to your request to Joe Englot for clarification on fireproofing work by Harris and Beach in 2 WTC.

Fireproofing upgrades were typically done by the Port Authority under PA contracts. Since the 85th floor work was done by Harris Beach under the TAA process, it was not included in the list. We do not have any other record of fireproofing upgrades done by tenants themselves.

The renovation work on the 85th floor was done in phases, which led the World Trade Department construction group to initially consider the renovation to be a partial floor renovation requiring only ¼ inch fireproofing. As indicated in my e-mail to you, dated December 16, 2004, World Trade Department staff subsequently directed Harris Beach to upgrade the fireproofing to 1 ½ inch due to the extent of renovation.

Based on the recollection of world Trade Department staff, the renovation work was in the final stage of completion but the fire proofing work was completed. All World Trade Department construction records were kept in WTC and were lost on 9/11.

I hope, this provides the clarification you requested.

Thanks

Saroj

-----Original Message-----

**From:** Englot, Joseph  
**Sent:** Monday, April 18, 2005 2:58 PM  
**To:** Bhol, Saroj  
**Cc:** Lin, C. John; Lombardi, Frank  
**Subject:** FW: Request for Clarifications on Fireproofing of the 85th Floor of WTC 2

Saroj,

This is a new request for information from NIST based upon previous information you sent them in December 2004.

Joe

Joseph M. Englot, PE  
 Asst. Chief Engineer/Design  
 Port Authority of NY & NJ  
 Engineering Department  
 973-792-4324

-----Original Message-----

**From:** John L. Gross [mailto:jgross@nist.gov]  
**Sent:** Monday, April 18, 2005 2:36 PM  
**To:** Englot, Joseph

665-P  
Cc: sivaraj.shyam-sunder@nist.gov; Terri@nist.gov; ncarino@email.nist.gov;  
Cheri.Sawyer@nist.gov  
Subject: Request for Clarifications on Fireproofing of the 85th Floor of WTC 2

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John

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<<Letter to PA regarding fireproofing 18 Apr 05 - B.doc>>



**UNITED STATES DEPARTMENT OF COMMERCE**  
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With regards,

John L. Gross, Ph.D., P.E.